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Applicant: **Saksun, John, Sr.**
Serial No.: **09/427,986**
Filed: **October 27, 1997**
For: **GOLF CLUB HEAD AND METHOD
OF MAKING THE SAME**
Examiner: **E. Lee**
Group Art Unit: **1732**
Docket: **SAK007/JTN**
Date: **June 26, 2002**

RESPONSE

United States Patent and Trademark Office
The Commissioner of Patents
2900 Crystal Drive
Arlington, Virginia
U.S.A. 22202-3513

Dear Sirs:

This is in response to the Office Action dated 03/28/2002, to which a response is due to be filed on or before June 28, 2002. Therefore, this response is being submitted as timely.

Claims 27 to 32, drawn to a method of molding a golf club head, classified in class 29, subclass 527.1 are the subject of this examination. In the office action, the examiner rejected the claims and made the rejection final. In response, the applicant has proposed some modifications to the claim which it is respectfully submitted to put the case in condition for allowance. Two (2) claims sets are enclosed, one showing the proposed changes and the other being a clean copy. The old numbering has been retained.

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In the claims now being sought, the step of positioning the anchoring element into the mold has been modified to refer to the positioning of a metal anchoring element to form a metal lined shaft receiving bore. In addition, an additional method step has been added (step d) of forming a metal to resin bond between the shaft anchoring element and the main body. The applicant respectfully submits that no new matter is being added and that this is taught in the specification at page 10, line 8 and at page 10, lines 21 to 31, as well as being shown in the drawings.

The present invention is directed to the problem of among other things, securing a molded resin golf club head to a golf club shaft which shaft may, for example, be made from metal. As indicated in the specification, it has been found by the applicant that metal shafts do not bond well to resin bodies. Although not known conclusively, it is believed that a resin club head will have a tendency to flex under impact, leading to cracking in the adhesive and eventually to a loss of the secure attachment. In the applicant's experience, a metal shaft connected to a resin body can come free over time with potentially dangerous results.

The applicant has solved this problem by providing a method of manufacturing a molded golf club head which includes the use of a metallic anchoring element. The metallic anchoring element is positioned in the mold and the golf club head is molded around the element which therefore forms a metal-lined golf club shaft receiving bore. The metallic element is securely bonded to the molded body of the club head, and knurling or surface features may be used to promote such a secure bond. The internal shaft of the anchoring element provides a smooth metal surface into which the golf club shaft may be inserted. An epoxy or other adhesive is then used to retain the golf club shaft in the bore, and the metal surface of the shaft anchoring element provides good and secure adhesion for a long lasting and safe connection.

The examiner rejected the claims currently on file as being obvious in view of a

combination of Florian (USP 3,843,122) and Shiotani (USP 4,988,104). The examiner correctly identifies that Shiotani teaches a shaft bore element being placed in a mold, and then a club head molded around the bore element such that a club shaft can be fixed within the resulting bore thereby forming a usable club. However, the applicant notes that all of the club head of the Shiotani invention is formed from a synthetic resin. More specifically, the patent teaches at column 1, line 67 and following "The club head of the invention has a synthetic resin frame which includes integrally formed hosel part where the club shaft is installed and a multiple pipe shaped installation part passing the center of the club head. A plurality of hollow synthetic resin members are defined at the pipe installation part." At column 3, line 7, it is taught that "The frame (including the shaft anchoring element) is made of high hardness composite resin material containing carbon fibers, glass fibers, Whisker fibers or Kebler (*sic*) fibers. The frame includes a hosel part 7."

Therefore, while Shiotani teaches an anchoring element for the shaft in association with a molded golf club head, the Shiotani anchoring element is formed from resin. Such a resin-based anchoring element will result in a golf shaft to resin bond. In the event the golf shaft is metal, the bond will therefore be a metal to resin bond which is directly opposite to the applicant's invention. Such a bond will be liable to crack and come loose over time. This is exactly the problem the applicant's invention is intended to overcome and therefore, it is respectfully submitted that the applicant's claims as amended by the proposed amendments patentably define over the combination of prior art cited by the examiner.

None of the prior art, whether taken singly or in combination, show forming a metal to resin bond between the shaft anchoring element and the main body of the molded golf club head, nor of providing a metal lined shaft receiving bore in the main body of the club head. The metal lined bore in the molded golf club head is an important aspect because it provides a dimensionally stable surface for preserving any adhesive connection between the shaft and the bore. The applicant respectfully submits that none of the other prior

patents address the attachment problem and therefore that the applicant's invention is both new and unobvious over the art cited by the examiner. As claim 27 is considered allowable, if amended, and since the remaining claims depend from claim 27, the remaining claims are also believed allowable.

It is respectfully requested therefore that the proposed amendments be entered and that the application be allowed. If the examiner has any questions or comments, he is invited to contact the under at (416) 955-0050, collect if necessary.

Respectfully submitted,
PIASETZKI & NENNIGER



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Encl.

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